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L 24702-66 EWP(e)/EWT(m)/ETC(f)/EWG(m)/T/EWP(t) IJP(c) JD/JG/AT/WH

ACC NR: AP6011351 SOURCE CODE: UR/0226/66/000/003/0088/0095

54
13

AUTHOR: Budnikov, P. P.; F. Ya. Kharitonov

ORG: Moscow Institute of Chemical Technology im. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Methods for increasing the strength of refractory compounds

27

SOURCE: Poroshkovaya metallurgiya, no. 3, 1966, 88-95

TOPIC TAGS: crystal structure, crystal lattice, material failure, refractory compound

ABSTRACT: The authors prove a known analogy between the absorption of energy by the crystal lattice of a refractory material during mechanical loading up to failure and during heating up to complete fusion. Considerations of the power capacity of the material up to its failure of the dependence of the power capacity on the degree of perfection of the crystal structure lead to the notion of improvement of structure by various mechanical, thermal, and other factors for the utilization of a large reserve of strength of the materials from its practical to its theoretical value. Orig. art. has: 5 formulas and 1 table. [Based on author's abstract] [AM]

SUB CODE: 11, 20/ SUBM DATE: 08Jan66/ ORIG REF: 026/ OTH REF: 0(

Card 1/1 FW

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 27397-66 EWP(e)/EWT(m)/T/EWP(t) IJP(c) JD/WH

ACC NR: AP6017667 SOURCE CODE: UR/0063/65/010/005/0506/0511

AUTHOR: Budnikov, P. P. (Academician AN SSSR); Sandulov, D. B.

ORG: none

TITLE: Filamentary monocrystals of refractory oxides and their applications

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo. Zhurnal, v. 10, no. 5, 1965, 506-511

TOPIC TAGS: refractory oxide, single crystal strontium compound, molybdenum, zirconate, crystal growth, elastic deformation, polycrystal, aluminum oxide, cuprous oxide, beryllium, crystal growing, magnesium oxide

ABSTRACT: The high strength-to-weight properties shown by filamentary crystals (whiskers) of the most diverse materials - salts, oxides, and metals - afford grounds for anticipation that the filamentary crystals themselves or compositions based on them (metallic matrix - ceramic fiber; ceramic matrix - metallic fiber) will find broad applications in technology. Preliminary studies have shown that the introduction into a matrix of polycrystalline strontium zirconate of 20-30% molybdenum fiber, 50 microns in diameter and 1.6 mm in length, alters the strength modulus of the material from $1.4 \cdot 10^5$ kg/cm^2 for polycrystalline $SrZrO_3$ to $1.7 \cdot 10^6$ kg/cm^2 for the composition. At present there are quite

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ACC NR: AP6017667

a large number of methods of obtaining filamentary crystals: crystallization from the gaseous phase of melts, solutions, decomposition of certain compounds, oxidation of metals, splitting of massive crystals along twinning planes, etc. As a rule, filamentary crystals obtained by deposition from the gaseous phase have the most perfect surface and the best properties.

Filamentary crystals of aluminum oxide are obtained when volatile lower oxides of aluminum are deposited from the gaseous phase, with their subsequent oxidation to Al_2O_3. The methods by which these compounds are obtained basically are oxidation of metallic aluminum and its alloys in a hydrogen medium containing small amounts of oxygen and water, or their reduction in Al_2O_3 at high temperatures.

Filamentary crystals of beryllium have been obtained by the condensation of the substance on apices of a growing crystal when polycrystalline BeO is heated to 1600, 1800, and 1900°C on the floor of a graphite block in argon for 10 hours. The growing crystals are arranged on the inner wall of a lid 10-50°C hotter than the specimen. Crystals in the form of plates and rods are up to 5 mm in size, and the rodlike crystals grow in groups in the same direction, forming columnar outgrowths. Short hexagonal prisms are 100 x 100 microns in size.

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ACC NR: AP6017667

Filamentary crystals of magnesium oxide have been obtained by heating a magnesium monocrystal in hydrogen, carbon dioxide, or mixtures of these gases at 1400 - 2100°K. A layer of thin filamentary monocrystals of magnesium oxide gradually envelopes the original monocrystal like a coccoon. It is assumed that the transfer of MgO passes through the gaseous phase.

Filamentary crystals of manganese oxide (MnO) of a high degree of perfection have been obtained when $MnCl_2$ is heated in a current of hydrogen for 1.5 hours at 900°C in a stainless tube. The crystal length varies from 0.5 to 5 mm.

Filamentary crystals of CuO grew spontaneously on copper on the surface (001) of annealed sheets (99.999% purity) as the result of oxidation in air (pressure of 760 mm Hg) at 300, 500, and 700°C; in which initially, a layer of CuO was formed; after which the growth of filamentary CuO crystals occurred. The most intense crystal growth was noted to 500°C and at a pressure of 760 mm Hg.

The most interesting and important properties of filamentary crystals are their high strength and high elastic deformation. According to certain literature data, the strength of filamentary crystals of beryllium oxide is 2500 kg/mm^2. The strength modulus of filamentary crystals is not different from its ordinary value.

Orig. art. has: 1 figure, 2 tables and 8 formulas. [JPRS]

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Card 3/3

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 29797-66 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG/GG
ACC NR: AP6015064 (A) SOURCE CODE: UR/0363/66/002/005/0829/0832

AUTHOR: Budnikov, P. P.; Kushakovskiy, V. I.; Sandulov, D. B.; Butra, F. P.

ORG: Moscow Chemical Engineering Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Growing of beryllium oxide single crystals

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 5, 1966, 829-832

TOPIC TAGS: beryllium compound, single crystal growing, crystallization

ABSTRACT: Beryllium oxide single crystals were grown by the vaporization-condensation method in a stream of moist air at 1400-1600°C. The crystals obtained had various forms (prisms, whiskers, plates). X-ray analysis revealed that the direction of growth of prismatic and filamentary crystals coincides with the direction of crystallographic axis c. High-temperature thermal tests showed that single crystals heated up to 1970, 2000, and 2100°C retained their form and transparency. X-ray diffraction showed that crystals heated to 2200°C lost their transparency and cracked due to the presence of discrete disoriented blocks in place of the single

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 29797-66

ACC NR: AP6015064

crystal. Crystallization of fused beryllium oxide from 2450-2500°C produced coarse (2 × 2 × 2 mm), transparent grains which x-ray diffraction data identify as pseudo-crystals. The disorientation of the blocks in the crystals is apparently due to a polymorphic transformation of beryllium oxide taking place during cooling of the single crystals. Orig. art. has: 3 figures and 1 table.

SUB CODE: 20,11 / SUBM DATE: 02Aug65/ ORIG REF: 001/ OTH REF: 004

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 46602-66 EWP(e)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/WH

ACC NR: AP6012839 (A)

SOURCE CODE: UR/0080/66/039/004/0736/0743

AUTHOR: Budnikov, P. P.; Sokhatskaya, G. A.; Kulygin, I. P.

ORG: None

TITLE: Conditions of crystallization and certain properties of electrosmelted cordierite castings

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 4, 1966, 736-743

TOPIC TAGS: crystallization, aluminum silicate mineral, magnesium compound, metal casting

ABSTRACT: The processes of crystallization and solidification of a magnesium aluminosilicate melt close to cordierite in composition were studied in order to obtain dense cordierite products with predetermined properties. The structure and phase composition of the castings were determined with an MP-3 polarizing microscope and URS-501 x-ray apparatus. Processes of cordierite formation were also followed by measuring the thermal expansion coefficient. In addition, the castings were subjected to thermal and physicomechanical tests. It was found that the properties of the final crystallization product can be varied by changing the conditions of crystallization and solidification. A product with a given set of properties can be obtained by introducing mineralizers and controlling the average temperature of the surface of the casting during the solidification stage. High-strength heat-stable magnesium

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aluminosilicate products can thus be obtained by combining the following methods: (a) introducing Na_2SiF_6 along with $ZrSiO_4$ as mineralizers which reduce the internal stresses in the castings and promote the formation of a more regular and fine-grained structure; (b) insuring the optimum crystallization temperature and optimum cooling rate by preheating the molds to 900—1000C before filling them, maintaining a temperature of 1000—1100C in the crystallization furnace, then furnace-cooling the casting at an average rate of 40 degrees per hour. Orig. art. has: 6 figures, 2 tables, and 3 formulas.

SUB CODE: 11, 20/ SUBM DATE: 22Sep65 / ORIG REF: 020 / OTH REF: 013

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ACC NR: AP6036902 (A) SOURCE CODE: UR/0226/66/000/011/0062/0065

AUTHOR: Budnikov, P. P.; Shishkov, N. V.

ORG: Moscow Chemical Engineering Institute im. D. I. Mendeleyev (Moskovskiy chimico-tekhnologicheskiy institut)

TITLE: Microstructure of molecular cermets

SOURCE: Poroshkovaya metallurgiya, no. 11, 1966, 62-65

TOPIC TAGS: cermet, molecular cermet, molecular cermet microstructure, molecular cermet preparation, molecular cermet property

ABSTRACT: A method of preparing molecular cermets is described. Molybdates, tungstates and chromates precipitated from aqueous solutions were subjected to selective reduction with hydrogen and the obtained powders were sintered. The zirconium oxide and molybdenum powders were obtained by reduction of zirconium molybdate at 1100C (for 1 hr) and sintered at 1600—2000C in vacuum. The zirconium oxide was stabilized in tetragonal form by the addition of 15% cerium oxide. The size of metal-phase particles increased from 1 to 4 μ with increases in sintering temperature from 1600 to 2000C. The calcium-molybdenum-zirconate cermet was sintered from coprecipitated calcium molybdate and zirconium molybdate powders. The average size of molybdenium particles in the cermet was 0.5 μ. The particles of the metal phase had a spherical shape. The nichrome-chromium-sesquioxide cermet was sin-

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tered in hydrogen at 1370C for 2 hr from powders obtained by reduction of basic nickel chromate with hydrogen. The size of chromium-oxide particles was 0.3—1.5 μ. The uniformity of phase distribution and dispersion of particles in all the cermets, obtained on basis of molybdates and other compounds, is considerably higher than in cermets prepared by conventional methods of sintering metal and oxide-powder mixtures. High dispersion of initial powders of molecular cermets contributes to intensive sintering. Consequently, the density of major cermets, especailly those based on molybdenum, is close to theoretical. The cermet microstructure and the size of grains of the metallic and oxide phases depend on the dispersion of initial materials, temperature and reduction rate, and sintering temperature. Orig. art. has: 6 figures. [WW]

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ATD PRESS: 5109

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 07460-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JH

ACC NR: AP6034571 SOURCE CODE: UR/0020/66/170/006/1310/1311

AUTHOR: Budnikov, P. P. (Corresponding member AN SSSR); Sandulov, D. B.; Popov, N. M.

ORG: Moscow Institute of Chemical Technology im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Investigation of magnesium oxide whiskers

SOURCE: AN SSSR. Doklady, v. 170, no. 6, 1966, 1310-1311

TOPIC TAGS: magnesium oxide, ~~magnesium oxide~~ whisker, single crystal, ~~whisker~~ growth

ABSTRACT: Single-crystal magnesium-oxide whiskers were grown from polycrystalline magnesium oxide at 1400—1500C in a kryptol furnace lined with magnesite tubes. The transport of magnesium oxide was done by the reaction: $MgO + CO \rightleftarrows Mg + CO_2$ or $2MgO + C \rightleftarrows 2Mg + CO_2$. The CO or C were supplied by the diffusion of carbon through the furnace lining. The structure, length, and shape of crystals depended upon the temperature: at 1500—1600 acicular crystals up to 30 mm long and 300 μ thick were formed. Whiskers up to 15 mm long and up to 30 μ in diameter grew at 1400—1500C, when the crystal growth is the most rapid; the growth rate is 2—3 μ/sec. The holding time extended over 2—3 hr transforms whiskers into angular crystals. Whiskers whose thickness is less than 3—4 μ have a very smooth surface. On heavier whiskers, the growth planes can be

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L 07460-67 2

ACC NR: AP6034571

seen. No capillarity was observed in whiskers. The authors express their thanks to R. S. Akbasheva and V. K. Sturman for their assistance in growing crystals. Orig. art. has: 1 figure.

SUB CODE: 11, 20/ SUBM DATE: 17Jun66/ ORIG REF: 001/ OTH REF: 003/ ATD PRESS: 5104

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ACC NR: AP6036789 SOURCE CODE: UR/0363/66/002/011/1985/1990

AUTHOR: Budnikov, P. P.; Kulikova, N. V.

ORG: Ivanovsk Chemical Technology Institute (Ivanovskiy khimico-tekhnologicheskiy institut)

TITLE: Production and properties of barium silicates and aluminates

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 11, 1966, 1985-1990

TOPIC TAGS: barium compound, silicate, aluminate, physical chemistry property

ABSTRACT: The minerals $BaO \cdot Al_2O_3$, $3BaO \cdot Al_2O_3$, $BaO \cdot 6\ Al_2O_3$, $2BaO \cdot SiO_2$, and $3BaO \cdot SiO_2$ were synthesized from a stoichiometric mixture of the components. The chemical composition of the starting materials is shown in a table. The charges of raw materials were wet ground in porcelain drums for 5 hours, which assured grinding to 60 microns or less. After mixing, the charges were pressed into briquets under a pressure of 400 kg/cm^2. The samples were calcined in a silicon carbide furnace, in which the temperature was raised at the rate of 250-300 degrees/hour. The calcining and sintering operation was carried out up to the point where the content of free BaO did not exceed 1%. A series of extensive tables shows the characteristics of the products of calcination, the chemical analysis of the calcination products, and the kinetics of

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the binding of water in the hydration of barium aluminates and silicates. The following conclusions were drawn: 1) the properties of the minerals vary as a function of the chemical nature of the barium containing raw materials; 2) monobarium and tribarium aluminates solidify rapidly, while barium hexaluminate does not have binding properties; 3) the hydration of barium aluminates proceeds with exceptional speed during the first period of solidification. Orig. art. has: 6 tables.

SUB CODE: 07, 11/ SUBM DATE: 31Mar66/ ORIG REF: 004/ OTH REF: 004

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ACC NR: AP7000014 (A) SOURCE CODE: UR/0080/66/039/011/2411/2417

AUTHOR: Budnikov, P. P.; Kharitonov, F. Ya.

ORG: none

TITLE: Migration of grain boundaries and effect of interparticle contacts on the compaction of corundum ceramics during sintering

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 11, 1966, 2411-2417

TOPIC TAGS: grain growth, sintering, corundum refractory

ABSTRACT: In an attempt to elucidate the role of growth of interparticle contacts in the compaction process, some regularities in the sintering of corundum ceramics (pure and with impurities) were investigated. Analysis of the data suggests that regularities of the crystallochemical stage of the process are manifested during recrystallization sintering of corundum. The fact that the process takes place in the kinetic region is indicated by certain temperature dependences of the grain growth rate, the effect of sintering time, and the deceleration of grain growth rate as a result of the action of magnesium oxide. However, the observed decrease in grain growth rate during sintering shows a change from a kinetic to a diffusion process as a result of the formation of a layer of solid reaction products (complex products with impurities in pure corundum and spinel $MgO \cdot Al_2O_3$ in microlite). On the basis of the data it is postulated that like impurities, fine grains of corundum in finely crystalline sin-

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ACC NR: AP7000014

tered corundum (microlite) inhibit processes associated with the exchange of atoms (diffusion). This barrier effect becomes enhanced as the size of corundum grains decreases. Orig. art. has: 6 figures and 4 formulas.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ACC NR: AP7006205 (A) SOURCE CODE: UR/0363/67/003/001/0094/0100

AUTHOR: Budnikov, P. P.; Kerbe, F. G.; Kostyukov, N. S.

ORG: Moscow Chomical Engineering Institute im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

TITLE: Effect of irradiation with thermal neutrons on certain electric properties of ceramics from pure aluminum oxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 3, no. 1, 1967, 94-100

TOPIC TAGS: corundum refractory, thermal neutron, irradiation effect, aluminum oxide, oxide ceramic, radiation damage, electric property

ABSTRACT: The effect of thermal neutrons on the radiation resistance and electric parameters of corundum ceramics was studied. Analysis of the nuclear reactions taking place (formation of the short-lived O^{19} and Al^{28} isotopes) shows that corundum can be recommended for use in thermal neutron fluxes. It is shown that only very high integrated thermal neutron fluxes of the order of 10^{21} n/cm^2 and higher have a very substantial effect on the electrophysical parameters of corundum: the electric conductivity, dielectric constant, and the dielectric loss factor and loss tangent are increased. This effect may cause a considerable decrease of the insulating properties of corundum. Such radiation defects are stable and are not annealed at high temperatures. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 20,11 SUBM DATE: 04Feb66/ ORIG REF: 003/ OTH REF: 015
UDC: 539.104:661.862.22

Card 1/1

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L 12612-65 EWT(1)/EWT(m)/EWP(j)/EEC(t)/EWP(t)/EWP(b) IJP(c) RM/JD

ACCESSION NR: AP4044925 S/0181/64/006/009/2583/2589

AUTHORS: Bersuker, I. B.; Budnikov, S. S.; Vekhter, B. G.; Chinik, B. I.

TITLE: Hyperfine structure of EPR spectra of complexes of copper with inversion splitting

SOURCE: Fizika tverdogo tela, v. 6, no. 9, 1964, 2583-2589

TOPIC TAGS: hyperfine structure, electron paramagnetic resonance, line splitting, dipole dipole interaction, quadrupole interaction, copper

ABSTRACT: The results of an earlier paper by one of the authors (I. B. Bersuker, ZhETF v. 44, 1239, 1963) are refined to include the hyperfine interaction and the inversion splitting. This makes it possible to estimate several details of the spectrum and to explain the variation observed in the hyperfine structure of the EPR spec-

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trum of Cu^{2+} complexes. The hyperfine interaction includes the dipole-dipole and quadrupole interaction. The results confirm the previously obtained frequency and temperature dependences of the spectrum. There are not enough experimental data for comparison with the results, because the direction of the external static magnetic field was chosen along one of the fourfold axes of the octahedron, for which the spectrum has the largest number of characteristic singularities in this direction, whereas the majority of the experimental data on hyperfine structure pertain to a field direction along the tragonal axis of the octahedron, for which the spectrum is much simpler. Nevertheless, where experimental data are available they are in good agreement with the results of the present paper. Orig. art. has: 4 figures, 11 formulas, and 1 table.

ASSOCIATION: Institut khimii AN MoldSSR, Kishinev (Institute of Chemistry, AN MoldSSR)

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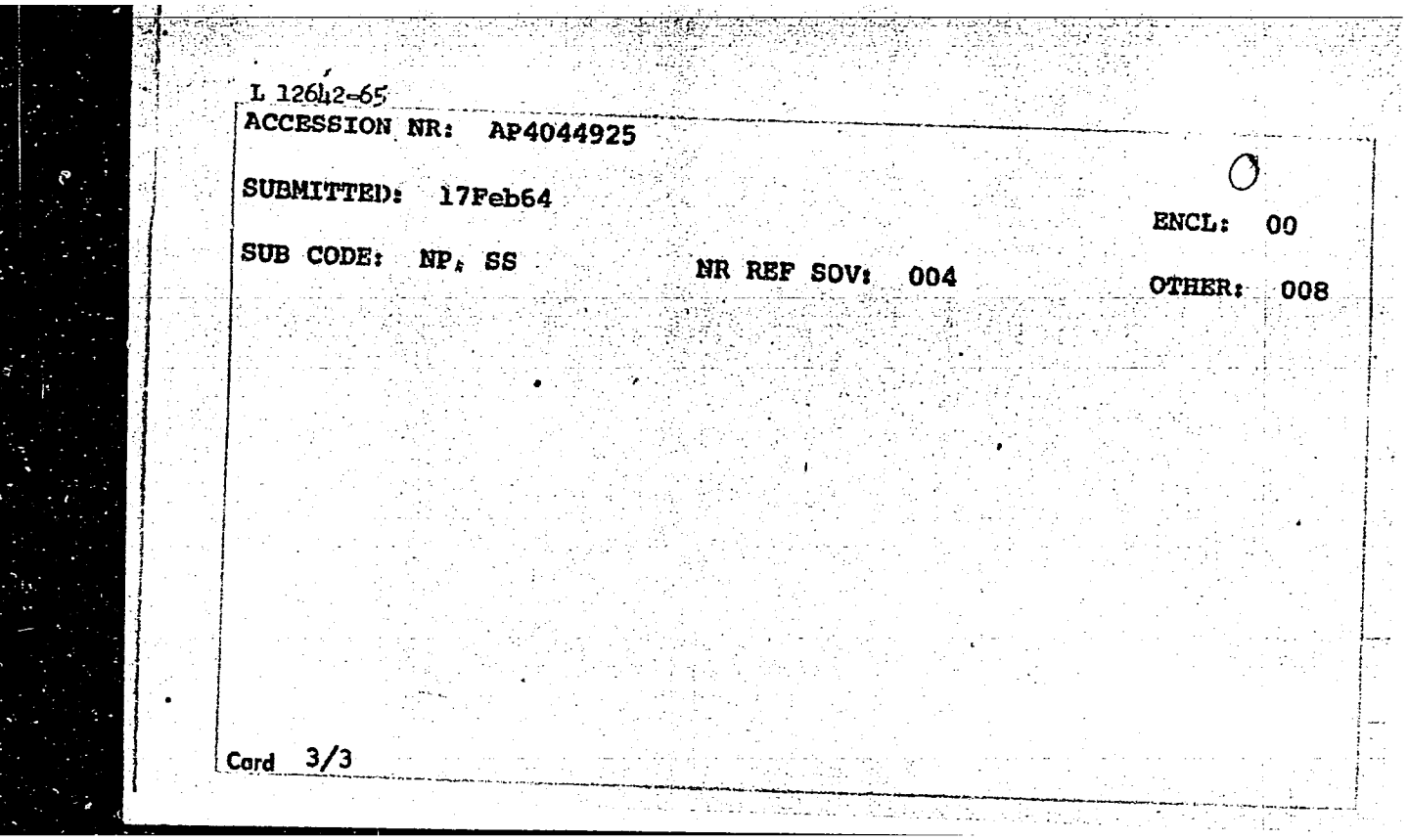

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ACCESSION NR: AP4044925

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NR REF SOV: 004

OTHER: 008

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, S.Ya.

Practices in the handling of mazut to be used as fuel. Sakh.prom. 33 no.12:28-31 D '59. (MIRA 13:4)

1.Kiyevenergonaladka.
(Petroleum as fuel)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V. A.

KHANIN, N.S., kandidat tekhnicheskikh nauk; LYUBINSKIY, N.M., inzhener, retsenzent; BUDNIKOV, V.A., inzhener, redaktor.

[IaAZ-204 and IaAZ-206 engines; building, principles of operation, and repair] Dvigateli IaAZ-204 i IaAZ-206; ustroistvo, osobennosti ekspluatatsii i remonta. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1954. 262 p. (MLRA 7:6)

(Automobiles--Engines)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V. A.

Budnikov, V. A.

"Investigation of the possibilities of increasing the productivity of BEP multi-bucket peat excavators by intensifying locomobile operation." Min Higher Education USSR. Moscow Peat Inst. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Sciences).

Knizhnaya letopis'
No. 21, 1956. Moscow.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

KAZANSKIY, Anatoliy Mikhaylovich, prof., doktor tekhn. nauk; BUDNIKOV, V.A., dots., kand. tekhn. nauk, red.; OVSYANNIKOVA, Z.G., red. izd-va; GARINA, T.D., tekhn. red.

[Study, adjustment and testing of steam engines] Issledovanie, naladka i ispytanie parovykh mashin. Moskva, Gos. izd-vo "Vysshaia shkola," 1961. 119 p. (MIRA 15:3)
(Steam engines)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ARTAMONOV, M.D., kand. tekhn. nauk, dots.; PANKRATOV, G.P., kand. tekhn. nauk, dots.; D'YACHENKO, N.Kh., doktor tekhn. nauk, prof., retsenzent; BUDNIKOV, V.A., kand. tekhn. nauk, red.; SIROTIN, A.I., red. izd-va; EL'KIND, V.D., tekhn. red.

[Theory and design of motor-vehicle and tractor engines] Teoriia, konstruktsiia i raschet avtotraktornykh dvigatelei. Moskva, Mashgiz, 1963. 520 p. (MIRA 16:10)

1. Zaveduyushchiy kafedroy Leningradskogo politekhnicheskogo instituta im. M.I.Kalinina (for D'yachenko).
(Motor vehicles--Engines)
(Tractors--Engines)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I.; LARISHCHEV, A.A.

New find of Devonian liptobioliths in the Kuznetsk Basin in connection with the problem of Paleozoic oil in Siberia. Trudy SNIGGIMS no.14:74-79 '61. (MIRA 15:8)
(Kuznetsk Basin--Coal geology) (Siberia--Petroleum geology)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I.

Pyritic iron-organic carbon ratio as an indicator of sedimentation. Geol. i geofiz. no.6:96-100 '62. (MIRA 15:7)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya, Novosibirsk.
(Rocks, Sedimentary--Analysis)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I.

[General technology of cotton manufacture] Obshchaia tekhnologiia khlopchatobumashnogo proizvodstva. Moskva, Gos. nauchno-tekhn. izd-vo tekstil'noi, legkoi i poligr. promyshl., 1946. 191 p. (MLRA 6:8)
(Cotton manufacture)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV,V.I., dotsent

The first Russian roving frame. Tekst.prom.8 no.2:9-10 F '48.
(Spinning machinery) (MLRA 8:11)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V. I.

See KUKIN, G. N. (1949) for Phase I Treasure Island Bibliographic Report

"Study of Fibrous Materials: Textile Fibers," (Book), 1949

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V. I.

"General Technology of Cotton Production" (Obshchaya tekhnologiya khlopchatobumazhnogo proizvodstva), Moscow, Gizlegprom, 1952

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I., dots.

Nomograms used for determining partial correlation coefficients. Sbor. nauch.-issl. rab. TTI no.3:121-130 '56. (MIRA 11:9)
(Nomography (Mathematics)) (Correlation (Statistics))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I., dots.

Process of dividing the product in spinning. Sbor. nauch.-issl. rab. TTI no.3:147-168 '56.
(Spinning) (MIRA 11:8)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I., dots.

Factors effecting eveness of card web separation performed by separating devices. Sbor. nauch.-issl. rab. TTI no.4:245-274 '57. (MIRA 11:9)

(Carding)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I., dots.; ZHOKHOVSKIY, V.V., starshiy prepodavatel'; SHAPORENKO, I.S., inzh.

Inaccuracies in a series of educational posters. Tekst. prom. 18 no.3:66-67 Mr '58. (MIRA 11:3)

1. Zaveduyushchiy kafedroy pryadeniya khlopka TTI for (Budnikov)
2. Kafedra pryadeniya khlopka TTI (for Zhokhovskiy)
(Textile industry--Study and teaching)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I.; ZHOKHOVSKIY, V.V.

New method of cotton spinning. Izv.vyz.ucheb.zav.;tekh.tekst.prom. no.5:55-60 '60. (MIRA 13:11)

1. Tashkentskiy tekstil'nyy institut.
(Cotton spinning)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

KUKIN, Georgiy Nikolayevich, prof.; SOLOV'YEV, Aleksey Nikolayevich, prof.; KISELEV, A.K., dotsent, retsenzent; PAKSHVER, A.B., prof., retsenzent; BUDNIKOV, V.I., dotsent, retsenzent; LAZAREVA, S.Ye., kand.tekhn.nauk, retsenzent; LUVISHIS, L.A., kand.tekhn.nauk, retsenzent; TUMAYAN, S.A., kand.tekhn.nauk, retsenzent; SHTEYNGART, M.D., red.; SHVETSOV, S.V., tekhn.red.

[Guide to textile materials] Tekstil'noe materialovedenie. Pod obshchei red. G.N.Kukina. Moskva, Izd-vo nauchno-tekhn.lit-ry. Pt.1. 1961. 303 p. (MIRA 15:4)

1. Ivanovskiy tekstil'nyy institut (for Kiselev). 2. Vsesoyuznyy zaochnyy institut legkoy i tekstil'noy promyshlennosti (for Pakshver). 3. Tashkentskiy tekstil'nyy institut (for Budnikov). 4. Vsesoyuznyy institut promyshlennosti lubyanykh volokon (for Lazareva). 5. TSentral'nyy nauchno-issledovatel'skiy institut sherstyanoy promyshlennosti (for Luvishis). 6. TSentral'nyy nauchno-issledovatel'skiy institut shelkovoy promyshlennosti (for Tumayan).

(Textile fibers)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I., kand.tekhn.nauk; ZHOKHOVSKIY, V.V., kand.tekhn. nauk

New methods of cotton spinning with the use of a twisted silver. Tekst. prom. 21 no.6:15-21 Je '61. (MIRA 15:2)
(Cotton spinning)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I., kand.tekhn.nauk

Tape condenser diagrams and their utilization. Tekst.prom. 22 no.2:26-30 F '62. (MIRA 15:3)

1. Zaveduyushchiy kafedroy pryadeniya khlopka Tashkentskogo tekstil'nogo instituta.
(Carding machines)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I., dotsent

Analyzing the automatic cotton fiber distributors as dividing devices. Sbor.nauch.-issl.rab.TTI no.12:133-146 '61.
(MIRA 15:11)
(Cotton machinery)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I.; KAZANSKIY, Yu.P.; LEZHNIN, A.I.; YADRENKIN, V.M.

Bentonite of the Kuznetsk Basin. Trudy SNIIGGIMS no.25:36-44 '62.
(MIRA 16:4)
(Kuznetsk Basin--Bentonite)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I.

Search for refractory raw material in the Kuznetsk Basin. Trudy SNIIGGIM no.25:57-62 '62. (MIRA 16:4)

(Kuznetsk Basin—Fire clay)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BGATOV, V.I.; AKUL'SHINA, Ye.P.; BUDNIKOV, V.I.; GERASIMOV, Ye.K.; GUROVA, T.I.; KAZANSKIY, Yu.P.; KAZARINOV, V.P.; KONTOROVICH, A.E.; KOSOLOBOV, N.I.; LIZALEK, N.A.; MATUKHIN, R.G.; MATUKHINA, V.G.; PETRAKOV, V.U.; RODIN, R.S.; SAVITSKIY, V.Ye.; SHISHKIN, B.B.; GRIN, Ye.P., tekhn. red.

[Lithoformational analysis of sedimentary rocks] Litologo-formatsionnyi analiz osadochnykh tolshch. Pod red. V.I. Bgatova i V.P.Kazarinova). (MIRA 16:7)

1. Sibirskiy nauchno-issledovatel'skiy institutu geologii, geofiziki i mineral'nogo syr'ya.
(Rocks, Sedimentary--Analysis)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BALYASOV, P.D.; BUDNIKOV, V.I., prof.; VANCHIKOV, A.N.; VLADIMIROV, B.M.; KISELEV, A.K.; KONYUKOV, P.M.; RAKOV, A.P.; SMELOVA, N.A.; EFROS, B.Ye.; ZOTIKOV, V.Ye., retsenzent; BELITSIN, N.M., retsenzent; KOSTIN, B.V., retsenzent; TERYUSHNOV, A.V., prof., red.; SOKOLOVA, V.Ye., red.; BATYREVA, G.G., tekhn. red.

[Cotton spinning] Priadenie khlopka. [By] P.D.Baliasov i dr. Pod red. V.I.Budnikova, A.P.Rakova, A.V.Teriushnova. Moskva, Rostekhizdat. Pt.2. 1963. 395 p. (MIRA 16:6)
(Cotton spinning)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I.

Role of facies analysis during the differentiation and correlation of coal bearing deposits in the Kuznetsk Basin. Mat. Tem. kom. no.1:67-76 '61. (MIRA 17:2)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, V.I.

Characteristics of continuous production lines for spinning. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.6:63-67 '63 (MIRA 17:8)

1. Tashkentskiy tekstil'nyy institut.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 43186-65 EWP(m)/EWT(1)/FCS(k)/EWA(d)/EWA(1) Pd-1
ACCESSION NR: AP5009767 UR/0170/65/008/003/0300/0306

AUTHORS: Budnikov, V. I.; Sergiyevskiy, A. V.

TITLE: On stability of a system of parallel boiling channels

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 8, no. 3, 1965, 300-306

TOPIC TAGS: boiling, flow stability, flow stability equation, Laplace transformation

ABSTRACT: The stability of vapor generation inside a system of parallel tubes was studied analytically. The system is depicted in Fig. 1 on the Enclosure. The solution is obtained for small perturbations, using the Laplace transformation on the energy balance equations $\frac{\partial}{\partial x} Gi + S\frac{\partial}{\partial t}\gamma i = Sq$; $\frac{\partial}{\partial x} G + S\frac{\partial}{\partial t}\gamma = 0$. Two analytic expressions are obtained defining the stability domain D_0

$\Phi_2 = (\sin\omega\tau_2 + \omega\tau_1\cos\omega\tau_2)\times[2B\omega\tau_1\{(1-\sigma)\omega\tau_1(1+A)\sin\omega\tau_2 - \sigma[\psi+(\omega\tau_1)^2(1+A)]-$

$(1-\sigma)\psi\cos\omega\tau_2\}]^{-1}$, $\Phi_1 = \frac{\sin\omega\tau_2 + \omega\tau_1\cos\omega\tau_2}{2B\omega\tau_1[\psi+(\omega\tau_1)^2(1+A)]}$; $\frac{\pi}{2} < \omega\tau_2 < \pi$. It is shown that the

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L 43186-65

ACCESSION NR: AP5009767

stability of a uniform stationary state depends on the hydraulic characteristics of the channel, on the number of channels, and on the nature of the external branches of the channel circuit. Also, critical parameters $U_1 = U_1^*(p_{20}, i, k, \theta_1)$ exist, at which for all $U_1 > U_1^*$ the system is stable at any N, V_1, V_2, and U_2 when $V_1 = (p_0 - p_1)_0$; $V_2 = (p_3 - p_4)_0$; $U_{11} = (p_1 - p_2)_0$; $U_{21} = (p_1 - p_3)_0$. Orig. art. has: 13 formulas and 3 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut g. Gor'kiy (Physico-Technical Institute)

SUBMITTED: 12May64 ENCL: 01 SUB CODE: ME, TD

NO REF SOV: 006 OTHER: 001

Card 2/3

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L 43186-65

ACCESSION NR: AP5009767

ENCLOSURE: 01

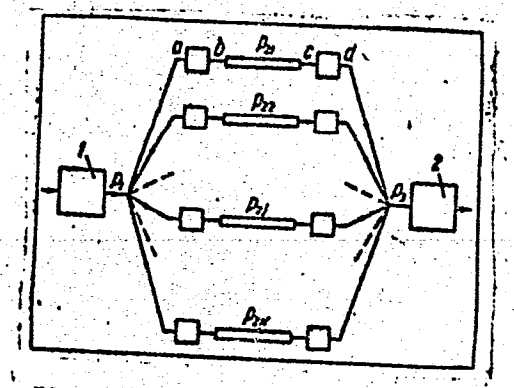

Fig. 1. Block-schematic of parallel boiling channels and external branches of the circuit. 1, 2- equivalent concentrated resistance (input and output)

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BUDNIKOV, V.I.; KONTOROVICH, A.E.

Composition of petroleums as related to the degree of the post-diagenetic change of rocks and the metamorphism of coals. Geol. nefti i gaza 9 no.8:22-26 Ag '65. (MIRA 18:8)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya, Novosibirsk.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

TUYEZOVA, Nina Aleksandrovna; Prinimali u[illegible]astiye: DEMINA, R.G.; BRYUZGINA, N.I.; ROSTOVTSEV, N.N., glavnyy red.; GURARI, F.G., zamestitel' glavnogo red.; UMANTSEV, D.F., red.; DERBIKOV, I.F., red.; KAZARINOV, V.P., red.; KALUGIN, A.S., red.; KOLOBKOV, M.N., red.; MALIKOV, B.N., red.; MIKUTSKIY, S.P., red.; BOTVINNIKOV, V.I., red.; BUDNIKOV, V.I., red.; BOGOMYAKOV, G.P., red.; SURKOV, V.S., red.; SUKHOV, S.V., red.; BOCHAROVA, N.I., red.

[Physical properties of rocks in the West Siberian Plain.] Fizicheskie svoistva gornykh porod Zapadno-Sibirskoi nizmennosti. Moskva, Nedra, 1964. 127 p. (Sibirskii nauchno-issledovatel'skii institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, no.31). (MIRA 18:7)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ANISIMOV, A.I.; BUDNIKOV, V.N.; VINOGRADOV, N.I.; GOLANT, V.Ye.

Causes of an anomalously rapid break-up of a plasma in a magnetic field. Zhur. tekh. fiz. 39 no.1:89-92 Ja '64. (MIRA 17:1)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ACCESSION NR: AP4009924 S/0057/64/034/001/0089/0092

AUTHOR: Anisimov,A.I.; Budnikov,V.N.; Vinogradov,N.I.; Golant,V.Ye.

TITLE: On the reasons for anomalously rapid decay of a plasma in a magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.1, 1964, 89-92

TOPIC TAGS: plasma, plasma decay, plasma decay in magnetic field, anomalous plasma decay, electron temperature, recombination, oblique drift waves, flute instability

ABSTRACT: Several experiments [orig.art.cites 6 references] have shown that a weakly ionized plasma in a cylindrical container of small diameter in a longitudinal magnetic field decays more rapidly than can be accounted for by current diffusion theory. In order to determine whether this anomalous behavior may be due to enhanced electron temperature, the decay of helium plasmas in a 0.5 cm diameter glass discharge tube was observed at ambient temperatures of 300 and 500°K. The gas pressure was 0.1 mm Hg, and longitudinal magnetic fields up to 4800 Oe were employed. The plasma decay was followed by observing the shift in the resonant frequency of a cavity resonator enclosing a portion of the discharge tube. The intensity of the light emitted by the decaying plasma was monitored with a photomultiplier in order

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to observe changes in the recombination rate. Raising the ambient temperature from 300 to 500°K produced a small increase in the plasma decay rate. The radiated light intensity was proportional to the square of the electron density and was independent of the magnetic field. The light intensity was greater by a factor 3 or 4 at 300° than at 500°. From these data and the roughly known temperature dependence of the recombination rate, it is concluded that the electron temperature could not exceed the ambient temperature by more than a factor 2.5. It is accordingly concluded that enhanced electron temperature cannot be responsible for the anomalous decay rate. That the rapid decay might be due to recombination is excluded by the fact that the decay rate increased with increasing ambient temperature, whereas the recombination rate decreased. It is inferred that the anomalously rapid decay of a plasma in a magnetic field is due to the development of instability. The excitation of oblique drift waves, and the development of small-scale flute instability due to rotation of the non-uniform plasma in the magnetic field are mentioned as possibilities. Orig.art.has: 1 formula and 3 figures.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ACC. NR: AP4009924

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physical-Technical Institute, AN SSSR)

SUBMITTED: 18Jul63	DATE ACQ: 10Feb64	ENCL: 00
SUB CODE: PH	NR REF SOV: 009	OTHER: 004

Card 3/3

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 10668-66 EWT(l)/EWT(m)/ETC/EPF(n)-2/EWG(m)/EWP(t)/EWP(b) IJP(c) JD/AT

ACC NR: AP5028317 SOURCE CODE: UR/0057/65/035/011/2028/2033

AUTHOR: Anisimov, A.I.; Budnikov, V.N.; Vinogradov, N.I.

ORG: Physico-technical Institute im.A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy Institut AN SSSR)

TITLE: Investigation of the decay of helium plasma in a spherical container

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 11, 1965, 2028-2033

TOPIC TAGS: plasma decay, helium plasma, recombination coefficient, recombination radiation, plasma diffusion, ~~spheric geometry~~ charged particle, microwave

ABSTRACT: The authors have investigated the decay of spectroscopically pure helium plasmas at pressures from 0.02 to 0.2 mm Hg and electron concentrations from 10^{11} t 10^{13} cm^{-3} in a 14 cm diameter spherical glass container which had been previously outgassed at 3 x 10^{-9} mm Hg and which was maintained at a temperature between 300 and 500°K during the measurements. The investigation was undertaken to determine the magnitude and mechanism of volume recombination. The plasmas were produced by discharging a 2μf capacitor charged to 8 kV through a four turn ~30 μH winding about the container. The charged particle density was determined by measuring the phase shift of 9375 and 36 600MHz microwaves traversing the plasma, and the recombination radiation from 3000 to 6000 A was recorded with a photomultiplier. The logarithm of the charged particle density decreased with time less rapidly than

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linearly, the nonlinearity being most pronounced at the higher pressures. From this it is concluded that volume recombination contributes significantly to the plasma decay. The volume recombination and ambipolar diffusion effects were separated by analyzing the slope of the decay curve as a function of pressure, electron concentration, and wall temperature in terms of an approximate theory of diffusion and recombination in a spherical plasma. The ratio of the intensity of the recombination radiation to the rate of recombination was found to be independent of the experimental conditions. From this it is concluded that only a single recombination mechanism is significant at the pressures, temperatures, and charged particle concentrations investigated, and from the dependence of recombination rate on electron concentration it is concluded that the effective mechanism is three-body collision betwe an ion and two electrons. The electron concentration dependence of the recombinatior rate was weaker than that found by E.Hinnov and I.G.Hirschberg (Phys.Rev., 125, 795, 1962); this discrepancy is ascribed to variation of the electron temperature during decay of the plasma correction for electron temperature variations calculated from the wall temperature variation of the recombination radiation intensity brought the observed recombination rates into good agreement with the predictions of the three-body collision theory. The ambipolar diffusion constant extrapolated to an electron temperature of $300^{\circ}K$ was found to be $300/p$ cm^2 sec. This value is some 30% lower tha those found by M.J.Mulcahy and J.J.Lennon (Proc.Phys.Soc. (London), 80, 626,1962)and H.J.Oskam and V.R.Mittelstadt (Phys.Rev.,132, 1435,1963), but the discrepancy is not considered serious in view of the nature of all three experiments. The authors

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L 10668-66
ACC NR: AP5028317

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thank Y.Ye.Golant for his interest in the work, S.I.Nanobashvili for participating in the preparation of the experiments, and Yu.N.Kuz'min for discussing the results. Orig. art. has: 10 formulas and 7 figures.

SUB CODE: 20 SUBM DATE: 12Feb65/ ORIG.REF: 005 OTH REF: 007

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 10669-66 EWT(1)/EWA(m)-2 IJP(c) AT

ACC NR: AP5028319 SOURCE CODE: UR/0057/65/035/011/2042/2051

AUTHOR: Anisimov, A.I.; Budnikov, V. N.; Vinogradov, N.I.; Golant, V.Ye.

ORG: Physico-technical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Use of open cylindrical resonators in plasma research

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 11, 1965, 2042-2051

TOPIC TAGS: plasma diagnostics, electron density, microwave, resonator, resonator Q factor, resonance frequency, helium plasma, plasma research

ABSTRACT: Advantages are pointed out of the use of open-ended circular cylindrical resonators rather than closed resonators for measuring electron concentrations in plasmas by the resonance frequency shift method; formulas are presented (most of these are taken directly from the literature) for calculating resonance frequencies, field distributions, and Q-factors of open resonators; and experiments are described which prove the feasibility of using open resonators in plasma diagnostics. There are two basic advantages of the open resonator; the open ends facilitate introduction of the plasma into the resonator, particularly if the plasma is confined in a cylindrical tube; and the resonant frequencies are widely separated, so that the higher modes are relatively easily identified. These features of the open resonator afford the following possibilities; the diameter of the resonator can be made only slightly larger than that of the tube containing the plasma, thus enabling the plasma

UDC: 533.9.07

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L 10669-66

ACC NR: AP5028319

to fill a large fraction of the resonator volume; a wide range of frequencies can be employed (by using the higher resonant modes), so that a wide range of electron concentrations can be measured; several different modes at widely differing frequencies can be simultaneously excited and their frequency shifts measured; information concerning the radial distribution of electron concentration can be obtained by measuring the frequency shifts of different modes having different radial distributions of the longitudinal electric field component; and an open resonator can be mounted within the plasma container itself. One can also excite the resonator at a frequency above the cutoff frequency at some point near the axis of the plasma column and determine the cutoff ;radius with the aid of the theory of a coaxial resonator. A 2.3 cm diameter 20 cm long open copper resonator excited in the 3 cm and 8 mm wavelength regions was employed to measure electron concentrations between 3×10^9 and 10^{11} cm^{-3} in helium plasmas excited in a 1.6 cm diameter 50 cm long quartz tube containing helium at 0.2 mm Hg by 20 μ sec discharges. Control measurements were made in the 10 cm wavelength region with a 9.1 cm diameter 3 cm long closed resonator having 2.6 cm diameter openings in the end walls to admit the plasma tube. The effect of the quartz tube on the Q-factor was found to be negligible, and its effect on the resonant frequency shift was determined experimentally. Measurements were made using the E_{011}, E_{012} and E_{221} modes of the open resonator and the E_{010} mode of the closed resonator, and the different measurements were found to be in good agreement with each other. The logarithm of the electron concentration decreased linearly with time, and the scatter of the 25 experimental points from the straight line did not exceed

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ACC NR: AP5028319

10%. It is concluded than an open cylindrical resonator can be employed to measure electron concentrations in plasmas. Orig. art. has: 16 formulas, 3 figures and 3 tables.

SUB CODE: 20 SUBM DATE: 15Mar65/ ORIG. REF: 013 OTH REF: 001

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

SOV/110-59-2-3/21

AUTHORS: Suyskiy, P.A. and Budnikov, V.V., Engineers

TITLE: Determination of the Permissible Number of Starts Per Hour for Squirrel Cage Induction Motors (Opredeleniye dopustimogo chisla vklyucheniy (puskov) v chas asinkhronnykh korotkozamknutykh dvigateley)

PERIODICAL: Vestnik Elektropromyshlennosti, 1959,Nr 2,pp 9-13 (USSR)

ABSTRACT: A good deal of work has already been done to determine the permissible number of starts per hour of a squirrel cage induction motor; this work is briefly reviewed and the disadvantages of existing methods of making the determination are described. This article shows how to obtain simpler formulae that do not have the disadvantages of the earlier ones. The formulae are derived on the basis that the temperature rise with the given starting conditions should be the same as under continuous full load operating conditions, see Fig 1. Of course, the temperature rises under different operating conditions will only be the same provided that the products of the equivalent heating losses and the thermal resistances are the same. In principle, the use of equivalent heating losses gives more accurate formulae for determining the

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permissible number of starts, but it is more convenient to use the total losses for this purpose. Eq (3) is then written for the conditions under which the temperature rise is equal under continuous and short term repeated conditions. The formulae to determine permissible number of starts per hour are then derived for three cases: repeated short term conditions with given duration of connection; repeated short term conditions with given operating times; and repeated short term conditions with given rest periods. When the formulae have been derived a formula for determining the permissible number of starts that is often quoted in handbooks is examined, and the reasons why it is inaccurate are considered. Values of coefficients that enter into the formulae for motors of series A and A0 with outputs from 0.6 - 100 kW are tabulated. The method by which these figures were obtained is described. The recommended formulae were tested on a number of machines operating under different conditions and it was found that when the recommended number of starts per hour was made the temperature rise

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Determination of the Permissible Number of Starts Per Hour for Squirrel Cage Induction Motors

was somewhat greater than under normal operating conditions and the reasons for this are considered. It is concluded that the formulae are simple, convenient, and sufficiently accurate for practical use and that allowance can be made for different conditions of cooling of protected and enclosed motors. A calculation of the permissible number of starts on a motor under given conditions is given as an appendix.

Card 3/3 There are 4 figures, 1 table and 5 Soviet references.

SUBMITTED: June 25, 1958

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOV, Ya.L., inzh.

Installation of devices for remote measuring of the temperature of concrete in structures of the Mamakan hydroelectric development. Gidr. stroi. 33 no.11:22-24 N '62. (MIRA 16:1)
(Mamakan Hydroelectric Power Station--Thermometers)
(Concrete construction)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

AUTHORS: Budnikov, Yu.N., Frolov, N.I. 119-58-4-10/15

TITLE: A Device for Detecting a Short Circuit Between Winding Turns in Fractional-HP Motors (Pribor dlya obnaruzheniya mezhvitkovykh zamykaniy obmotok malogabaritnykh elektricheskikh dvigateley)

PERIODICAL: Priborostroyeniye, 1958, Nr 4, pp. 22-23 (USSR)

ABSTRACT: This device works with a phase-sensitive differential rectifier and with an ordinary device fitted with an indicator hand. It permits measuring the voltage in the short-circuited winding if the winding is located in an alternating field with increased frequency. The individual parts of the device are described without any more detailed values being given. The wiring circuit in principle of the indicator device and the photograph of the holding device for the motor part to be investigated are shown. There are 4 figures.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOVA, A. V.

Cand Agr Sci - (diss) "Comparative evaluation of spring and winter lambings in Romanov sheep-raising." Moscow, 1961. 20 pp; (All-Union Scientific Research Inst of Animal Husbandry); 160 copies; price not given; (KL, 10-61 sup, 221)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ANDREYEV, G.S., kand. tekhn. nauk; BOKUCHAVA, G.V., kand. tekhn. nauk, dots.; BRAKHMAN, L.A., inzh.; BUDNIKOVA, A.V., inzh.; GORDON, M.B., kand. tekhn. nauk, dots.; ZHAVORONKOV, V.N., inzh.; KARZHAVINA, T.V., kand. tekhn. nauk; KOROTKOVA, V.G., inzh.; KORCHAK, S.N., inzh.; KLUSHIN, M.I., kand. tekhn. nauk, dots.; KUZNETSOV, A.P., kand. tekhn. nauk, dots.; KURAKIN, A.V., inzh.; LATYSHEV, V.N., inzh.; OL'KHOVSKIY, V.N., inzh.; ORLOV, B.M., kand. tekhn. nauk, dots.; OSHER, R.N., inzh.; PODGORKOV, V.V., inzh.; ; SIL'VESTROV, V.D., kand. tekhn. nauk [deceased]; TIKHONOV, V.M., inzh.; TROITSKAYA, D.N., inzh.; KHRUL'KOV, V.A., inzh.; LESNICHENKO, I.I., red. izd-va; SOKOLOVA, T.F., tekhn. red.; GORDEYEVA, L.P., tekhn. red.

[Lubricating and cooling fluids and their use in cutting metals] Smazochno-okhlazhdaiushchie zhidkosti pri rezanii metallov i tekhnika ikh primeneniia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 291 p. (MIRA 15:1)
(Metalworking lubricants)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

POLESHCHENKO, I.V., kand. tekhn. nauk; BUDNIKOVA, G.S., inzh.

Bases for the qualitative value of the reliability of agricultural machinery. Trakt. i sel'khozmash. no.12: 21-23 D '65. (MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

TAUBE, P.R.; TSVETKOVA, N.K.; BUDNIKOVA, I.K.

Hydrocarbonate method for removing harmful compounds from mustard cake. Izv.vys.ucheb.zav.; pishch.tekh. no.6:56-57 '58. (MIRA 12:5)

1. Astrakhanskiy tekhnicheskiy institut rybnoy promyshlennosti, Kafedra obshchey khimii.
(Mustard)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

SHARAF, Sh.G.; BUDNIKOVA, N.A.; SUBBOTIN, M.F., otv. red.

[Theory of the motion of Pluto. Pt 2. Pluto's perturbations of the second order in relation to perturbing masses. Pt.3. Recomputation of Pluto's perturbations of the first order in relation to perturbing masses. Pt.4. Pluto's new elements.] Teoriia dvizheniia Plutona. Moskva, Nauka. Pt.2. Vozmushcheniia Plutona vtorogo poriadka otnositel'no vozmushchaiushchikh mass. Pt.3. Perevychislenie vozmushchenii Plutona pervogo poriadka otnositel'no vozmushchaiushchikh mass. Pt.4. Novye elementy Plutona. 1964. 161 p. (Akademiia nauk SSSR. Institut teoreticheskoi astronomii. Trudy, no.10). (MIRA 17:11)

1. Direktor Instituta teoreticheskoy astronomii AN SSSR; chlen-korrespondent AN SSSR (for Subbotin).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

SVETKOVA, E.K.; [illegible], N.K.

Study on the carbohydrate composition of mustard cakes by the chromatographic method. Trudy Astr. tekh. inst. ryb. prom. i khoz. no.8:3-8 '62.

Determination of fatty monobasic and dibasic acids in the mustard cake by the paper chromatography method. Ibid.:9-13 '62.
(MIRA 17:8)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

S/058/62/000/004/136/160
A061/A101

AUTHOR: Budnikova, N. P.

TITLE: A study of the electron conduction of diode spacings

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 15, abstract 4Zh102 ("Uch zap. Saratovsk. un-t", 1960, v. 69, 57 - 67)

TEXT: Results of a theoretical study of electron conduction of a plane interelectrode spacing, in which there is a constant electric field besides a h-f field, are presented. If a constant retarding or accelerating field is applied, electron conduction is shown to be four times higher than in the absence of constant fields at the same angles of departure. The experimental verification was made on reflector klystrons with disk-shaped outlets, the design of which permitted different direct voltages to be fed to the electrodes of the h-f spacing. The positive reflector potential ensured the absence of a reverse electron flow. The mean angle of departure varied from π to 2.8 π. The values obtained for the dependence of the active component of electron conduction on the angle of departure fit calculated values qualitatively. The behavior of the

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

A study of the electron conduction of diode spacings S/058/62/000/004/136/160
A061/A101

reactive component diverges from the theoretical dependences considerably. The increase of electron conduction predicted by the theory was not observed either.

M. Devyatkov

[Abstracter's note: Complete translation]

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

S/194/62/000/004/088/105
D271/D308

9,4220

AUTHOR: Budnikova, N. P.

TITLE: A method for improving the quality factor of cavity resonators

PERIODICAL: Referativnyy zhurnal, [illegible] i poluprovodnikovaya elektronika, no. 4, 1962, abstract 4zh156 (Uch. zap. Saratovsk. un-t, 1960, 69, 69-70)

TEXT: Brief report on the results of an experiment in which the quality factor of resonators of an under-excited reflex klystron was aimed to be improved by the negative conductance of electron flow. When the resonator was loosely coupled to the circuit, quality factor, measured by comparison with a standard resonator, depended linearly on the beam current, up to the excitation point; the quality factor rose from the values of 500 and 800 ('cold' tube) to 6.10^4 and 8.10^4, respectively. It is noted that the maximum quality factor does not depend on the zone number. [Abstracter's note: Complete translation.]

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

S/194/62/000/005/051/157
D256/D308

9.4220

AUTHOR: Budnikova, N.P.

TITLE: Experimental investigation of electron conductivity of a reflecting klystron

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 5,1962, abstract 5-3-38 ch (Nauchn. yezhegodnik, Saratovsk. un-t. Fiz. fak. i N.-i in-t mekhan. i fiz., 1955, Saratov, 1960, 7-14)

TEXT: The electron conductivity was experimentally investigated of a reflecting klystron with resonator tuned within the 8.6 to 10 cm band. The active component of the electron conductivity was determined from the change of the Q-factor appearing when the electron beam was switched on. The Q-factor was measured using a four-terminal method. The reactive component was determined from the resonance frequency shift following switching on the beam. The experimental data are in good agreement with results derived from theory of reflecting klystrons under assumption of a small value of the bunching parameter. All the measurements were conducted using low beam cur-

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Experimental investigation of ... S/194/62/000/005/051/157
D256/D308

rents (0.37 mA) so that the influence of the space charge upon the conductivity could be neglected. 8 references. [Abstractor's note: Complete translation].

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ACCESSION NR: AP4040746 S/0142/64/007/002/0131/0138

AUTHORS: Budnikova, N. P.; Sinitsy*n, N. I.; Shevchik, V. N.

TITLE: Effect of beam current decrease along a slow wave system on the operation of backward and traveling wave tubes

SOURCE: IVUZ. Radiotekhnika, v. 7, no. 2, 1964, 131-138

TOPIC TAGS: backward wave tube, traveling wave tube, slow wave system, electron beam, electron loss

ABSTRACT: In view of the facts that earlier analyses neglected the decrease in the dc component of the beam current in a traveling or backward wave tube, a decrease which always occurs in real tubes, the authors develop a linear theory in which the electron loss in interaction space is taken into account. Since the character of the beam depends essentially on the type of slow-wave structure employed, estimates are made for both continuous and decrease reduction in the

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ACCESSION NR: AP4040746

beam current. A successive approximation technique previously developed by one of the authors (V. N. Shevchik, Osnovy* elektroniki SVCh, Izd-vo Sovetskoye radio, 1959; V. N. Shevchik and N. I. Sinitsy*n, Radiotekhnika i elektronika, 1961, v. 6, 11, 1881) is used in the calculations, the continuous decrease being assumed linear. The difference between continuous and discrete increase begins to come into play only when a small number of gaps is used in the slow-wave system. The changes produced by the decrease of beam current in the efficiency of a backward-wave tube and in the gain of a traveling-wave tube are estimated and found to agree well with the experimental data. Orig. art. has: 11 figures and 20 formulas.

ASSOCIATION: None

SUBMITTED: 25Jan63 DATE ACQ: ENCL: 00

SUB CODE: EC NR REF SOV: 004 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ANDRUSHKEVICH, V.S.; BUDNIKOVA, N.P.; GRIGOR'YEV, M.A.; ZHARKOV, Yu.D.; SHITSYN, N.I.; STAL'MAKHOV, V.S.; TRUBETSKOV, D.I.; SHVEDOV, G.N.; SHEVCHIK, V.N.; MOSKOVA, R.F., red.

[Electronic superhigh-frequency devices] Elektronnye pribory sverkhvysokikh chastot. Saratov, Izd-vo Saratovskogo univ., 1964. 187 p. (MIRA 18:4)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOVA, N.V., kand. veter. nauk

Pathologicohistological changes in the nervous system of hens in A-avitaminosis. Trudy SZVI 11:243-247 '62. (MIRA 16:7)

(Nervous system—Birds)
(Deficiency diseases in poultry)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOVA, O. K.

"On the Theory of Gold Precipitation With Metallic Zinc From Cyanide Solutions." Thesis for degree of Cand. Technical Sci. Sub, 24 Oct 49, Moscow Inst of Non-ferrous Mettals and Gold imeni M. I. Kalinin.

Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

USSR/Metals - Gold, Extraction Feb 51

"Oxidation-Reduction Processes During Cementation of Metals From Cyanide Solutions," I. N. Plaksin, Corr Mem, Acad Sci USSR, G. K. Budnikova, Moscow Inst Nonferrous Metals and Gold imeni M. I. Kalinin

"Iz Ak Nauk, Otdel Tekh Nauk," No 2, pp 267-272

Expts for pptn of gold with metallic zinc showed small amt of dissolved oxygen (to 1 mg/l) does not hamper and even improves process. This factor, according to authors, was unknown to previous investigators and was not considered in industrial practice. Amts of oxygen in soln over 1 mg/l have

185T85

USSR/Metals - Gold, Extraction (Contd) Feb 51

detrimental effect on pptn by increasing amt of dissolved and oxidized zinc, causing unproductive consumption of ppt.

185T85

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

FRIDMAN, V.M., inzh.; BUDNIKOVA, T.V., inzh.; ZAGORODNAYA, G.A., inzh.

Torque oscillations of the shaft of a turbine unit in the presence of sudden short-circuits. Vest.elektroprom. 32 no.2:14-17 F '61. (MIRA 15:5)

(Turbogenerators--Vibrations)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

BUDNIKOVA, T.V.; FRIDMAN, V.M.

Choice of the points of support for a telescope mirror.
Izv. GAO 24 no.1:119-124 '64. (MIRA 18:3)

1. Kafedra dinamiki i prochnosti mashin Leningradskogo politekhnicheskogo instituta imeni Kalinina.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

LIPATOVA, T.E.; BUDNIKOVA, V.A.; LIPATOV, Yu.S.

Interaction of polymers with fillers. Part 5: Effect of the conditions of depositing a polymer on glass fiber and the method of treating the glass fiber on the properties of the polymer. Vysokem.soed. 4 no.9:1398-1403 S '62. (MIRA 15:11)

1. Institut obshchey i neorganicheskoy khimii AN Belorusskoy SSR.

(Glass fibers)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 17233-63 BDS/EWP(j)/EPR/EPF(c)/EWT(m)--AFFTC/ASD--Ps-4/
Pc-4/Pr-4--RM/WW

ACCESSION NR: AP3006001 S/0250/63/007/008/0534/0537

AUTHOR: Lipatova, T. E.; Budnikova, V. A.

TITLE: Study of the curing of soluble polymers based on polyester-acrylates

SOURCE: AN BSSR. Doklady*, v. 7, no. 8, 534-537

TOPIC TAGS: resin, polyester, polyester acrylate, oligomer, beta polymer, three dimensional polymer, film, filament, infrared spectroscopy, infrared spectrum, thermomechanical curve, thermomechanical property, MGF-2, TMGF-11, MGF-9, cross linking, deformation strain, unsaturation, molding, compression molding, property modification

ABSTRACT: The mechanism of the formation of a three-dimensional network in films and filaments of soluble polymers (β-polymers) (T. E. Lipatova, Vysokomol. soyed., 2, 1881, 1960) of polyester-methacrylate resin has been studied. Infrared spectra and thermomechanical properties of the polymers were determined. Three β-polymers were synthesized from the following oligomers: resins

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 17233-63

ACCESSION NR: AP3006001

MGF-9 (bis(diethylene glycol) dimethacrylate phthalate), TMGF-11 (glycerol phthalate tetramethacrylate [sic]), and MDF-2 (triethylene glycol dimethacrylate phthalate [sic] with a degree of polymerization of 2). To study the conversion of the oligomers to three-dimensional polymers, the infrared spectra of the three oligomers, β-polymers in benzene solution, films cast from the benzene solution, and the solid three-dimensional polymers were measured. The three-dimensional polymers from MGF-9 and TMGF-11 were obtained by carbonium-ion polymerization or by compression molding of their β-polymers. Owing to the low reactivity of double bonds in β-polymers from MDF-2, the solid three-dimensional structure was obtained by ultraviolet irradiation in vacuum of tacky β-polymers which had been partially cross-linked in air. From the infrared spectra of MGF-9, its β-polymer in benzene solution, and the solid three-dimensional polymer, and from data in the literature, the 1630 cm^{-1} absorption band, which is present in methyl methacrylate and absent in poly(methyl methacrylate), was selected as a measure of the degree of unsaturation of the

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 17233-63

ACCESSION NR: AP3006001

oligomers and their polymers. The 812 cm^{-1} absorption band was used to verify the degree of unsaturation, and the 745 cm^{-1} absorption band, for quantitative determination of unsaturation by a method previously described (T. E. Lipatova, Kand. diss., FKhI im. Karpova, M. 1954). It was found that unsaturation decreases from the oligomer to the three-dimensional polymer. On conversion of the oligomer to the β-polymer and to the three-dimensional polymer, a general increase in background in the 1000—1400 cm^{-1} region was observed, suggesting that a three-dimensional network of C-C and C-O-C links is formed in the polymer. The results of infrared analysis were in good agreement with the thermomechanical data obtained. The thermomechanical curves of a polymer molded at 50C from the β-polymer of MGF-9 indicated that high deformation begins at 60—70C, increases with temperature, and reaches a maximum at 130—140C. Further heating caused a decrease in deformation, owing to network-structure formation in the polymer by the reaction of the remaining double bonds. Polymers from TMGF-11 had thermomechanical properties generally associated with polymers

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

L 17233-63

ACCESSION NR: AP3005001

having a considerably denser three-dimensional network. The deformation of this polymer was low, despite the residual double bonds present, owing to restricted side-chain mobility. The thermomechanical curve of the polymer from MGF-2 reveals high deformation, suggesting a weakly cross-linked three-dimensional structure. Deformation does not decrease with an increase in temperature, since the absence of double bonds prevents further cross-linking. It is concluded that by varying the molding conditions it is possible to obtain three-dimensional network structures with various degrees of cross-linking and unsaturation and thus to regulate the physicomechanical properties and chemical stability of polymers obtained from a given original polyester. Orig. art. has: 1 table and 2 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN BSSR (Institute of General and Inorganic Chemistry, AN BSSR)

SUBMITTED: 15Jan63 DATE ACQ: 11Sep63 ENCL: 00

SUB CODE: CH, MA NO REF SOV: 009 OTHER: 002

Card 4/4

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L 45407-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL RM/WW

ACCESSION NR: AP5011244 UR/0190/65/007/004/0580/0585

AUTHORS: Lipatova, T. E.; Siderko, V. M.; Budnikova, V. A.

TITLE: The reactivity of oligoesters in carbonium polymerization

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 4, 1965, 580-585

TOPIC TAGS: polymerization, ester, IR spectroscopy, ethyl chloride

ABSTRACT: The copolymerization of the unsaturated oligoester dimethylacrylate-bis-(triethyleneglycol) phthalate with styrene was studied, with the polymerization being carried out in ethyl chloride at 0°C. The total concentration of reacting substances was about 1.25 mole/liter with different concentrations of the catalyst $TiCl_4$: about 0.003 and about 0.015 mole/liter. The experimental method followed that previously described (Vysokomolek. soyed., 6, 910, 1964). Composition of the polymers was determined by IR spectroscopy. The relative monomer reactivity ratios were calculated for the different catalyst concentrations. For a catalyst concentration of 0.003 mole/liter, the ratio for styrene was found to be 0.15, for oligoester acrylate 0.75. At a concentration of 0.15 mole/liter, the values were 0.36 and 0.54 respectively. At oligoester contents above 45% (45-70%) the copolymer showed anomalously high content of this

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compound. The relative monomer reactivity ratios for this region were computed and found to be 0.05 and 2.45 respectively. These results show that the reactivity of oligoester acrylate changes according to the molar ratio of oligoester to the catalyst. It is concluded that, during polymerization of the oligoester molecules containing atoms that are free to form complexes with the catalysts, the formation of complexes determines the composition of the copolymer. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii, AN BSSR (Institute of General and Inorganic Chemistry, AN BSSR)

SUBMITTED: 25Apr64 ENCL: 00 SUB CODE: OC

NO REF SOV: 006 OTHER: 003

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

USSR/Cultivated Plants - Fodder. M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15661

Author : V.I. Budnikova, Z.P. Gorbunova, A.S. Shishkina

Inst : Stavropol'skiy Agricultural Institute.

Title : The Carotene Content in Annual and Perennial Grasses from Various Harvestings.
(Soderzhaniye karotina v odnoletnikh i mnogoletnikh travakh razlichnikh ukosov).

Orig Pub : Sb. nauchn. -issled. rabot stud. Stavropol'sk. s.-kh. in-t, 1956, vyp. 4, 84-86.

Abstract : The carotene content was determined in the hay of rye-grass, sainfoin, alfalfa, winter and perennial rye during the 1, 2, 3 harvesting. The highest carotene content was in the sainfoin hay from all harvestings: 83.1-101.8 milligrams per 1 kilogram, and in the

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USSR / Farm Animals, General Problems Q-1

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7123

Author : Z. P. Gorbunova, A. S. Shishkina, V. I. Budnikova, V. G. Karyukov
Inst : Stavropol Agricultural Institute
Title : The Content of Protein and Carotene in Autumn Pastures

Orig Pub: Sb. nauchno-issled. rabot stud. Stavropol'sk. s-kh. in-ta, 1956 vyp. 4, 88-90

Abstract: The greatest amount of digestible protein is contained in the aftermath of Lucerne (34.5 grams in one kilogram), and the smallest amount in the aftermath of Sudan grass (27.0 grams). The greatest amount of carotene is contained in the green mass of barley (59.3 grams in one kilogram).

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ACCESSION NR: AP4036725 S/0020/64/156/002/0379/0382

AUTHOR: Lipatova, T. E.; Budnikova, V. A.; Siderko, V. M.

TITLE: On the mechanism of carbonized polymerization of unsaturated polyesters

SOURCE: AN SSSR. Doklady*, v. 156, no. 2, 1964, 379-382

TOPIC TAGS: unsaturated polyester, carbonized polymerization, titanium chloride, polymer, ethyl chloride, catalyst, chemical property, styrene, copolymer, oligomer

ABSTRACT: The authors investigated the subject under the effect of a $TiCl_4$ catalyst and obtained polymers possessing valuable mechanical and chemical properties. This resulted in an investigation of the carbonized copolymerization of dimethacrylate-bis-triethylene glycol-phthalate (MFG-9) with a styrene. Polymerization was effected in a solution of carefully dried ethyl chloride at a total monomer concentration of about 1.25 moles per liter and a catalyst concentration of about 0.003 and 0.015 moles per liter at $0^{\circ}C$. Theoretical and experimental curves for both catalyst concentrations are presented in a figure showing the dependence of the copolymer composition on the composition of the original mixture. It is concluded that in a joint polymerization of an oligomer with a styrene in the presence of $TiCl_4$, the reactivity rate of the oligomer depends not only on the structure of the double

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ACCESSION NR: AP4036725

bond but also on the whole molecule. This structure determines the composition and structure of the oligomer complex -- the catalyst, which, in turn, determines the reactivity of unsaturated polyesters and carbonized polymerization and, consequently, the basis of all complex physico-mechanical properties of copolymers. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii. Akademii nauk BSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, BSSR)

SUBMITTED: 10Jan64 DATE ACQ: 03Jun64 ENCL: 00

SUB CODE: OC NO REF SOV: 007 OTHER: 002

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310010-6

ARTEMOV, D.M.; RUDENKO, P.A.; BOYARIN, B.Ya.; KURTSEV, V.V.; VOLODINA, M.A.; KRIVOVAYA, V.I.; KOROLEV, I.V.; BUDNIKOVA, Z.M.; METAL'NIKOVA, A.L.; AFANAS'YEV, S.P., red.; GUDKOVA, N., red.; YAKOVLEVA, Ye., tekhn. red.

[Economy of Moscow Province; a statistical manual] Narodnoe khoziaistvo Moskovskoi oblasti; statisticheskii sbornik. [Moskva] Mosk. rabochii, 1958. 270 p. (MIRA 11:9)

1. Moscow (Province). Oblastnoye statisticheskoye upravleniye. 2. Nachal'nik Moskovskogo oblastnogo statisticheskogo upravleniya (for Afanas'yev).
(Moscow Province--Economic conditions--Statistics)

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Petrographic analysis is an operational method for controlling production. TSement 26 no.5:32 S-O '60. (MIRA 13:10)
(Belgorod—Cement plants) (Production control)

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BUDNITSKAYA, P.Z.

GONCHAROVA, V.I., BELOVA, Z.N., BUDNITSKAYA, P.Z., MUSHKATBLAT, S.M., PYATYKHINA, D.P.

Production of vitamin B_{12} from propionibacteria [with summary in English]. Mikrobiologiia 27 no.2:226-228 Mr-Ap '58 (MIRA 11:5)

1. Institut epidemiologii i mikrobiologii im. Gamaleya AMN SSSR.
(VITAMIN B 12
optimum medium for production from propionibacteria (Rus))
(PROPIONIBACTERIUM, culture
optimum medium for cultivation in production of vitamin B 12 (Rus))

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BUDNITSKAYA, P.Z. (Moskva)

Method of obtaining pyrogenal from cultures of Pseudomonas aeruginosa. Pat. fiziol. i eksp. terap. 4 no. 5:69-71 S-O '60. (MIRA 13:12)

1. Iz otdela infektsionnoy patologii i eksperimental'noy terapii (zav. - chlen-korrespondent AMN SSSR prof. Kh. Kh. Planel'yes) i Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR.

(PSEUDOMONAS AERUGINOSA) (PYROGENS)

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